

REMARKS

The Examiner has rejected claims 1–33. The Examiner has objected to claims 8 and 29. Claims 1–33 are being canceled without prejudice or disclaimer. Claims 34–66 are being added to further recite the features of the invention. As a result, claims 34–66 are pending for examination with claims 34, 45, and 53 being independent claims. The new claims find support in the specification and do not constitute new matter.

Requirement for Information under 37 CFR 1.105

The Examiner has requested, "...any information regarding spam filtering techniques used by Big Fish Communications which relates to the claims of the instant application." (OA, pg. 2, lines 8–10) Applicants have canceled claims 1–33. Accordingly, the Requirement for Information under CFR 1.105 is moot. Never the less, the previously claimed and presently claimed invention is an improvement over spam filtering techniques used by Big Fish Communications and which are described in the "Background of the Invention" section of the original patent application. Additional relevant documentation regarding pre-2003 spam filtering techniques used by Big Fish Communications is not readily available. This response to the Requirement for Information is provided herein per 37 CFR 1.105(a)(4) and 37 CFR 1.105(b).

Claim Objections

The Examiner has objected to claims 8, 13, and 29 under 37 CFR 1.75(c). Claims 8, 13, and 29 have been canceled. Accordingly, the objections are moot.

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Rejections under 35 U.S.C. §102

The Examiner has raised an issue of public use or on sale activity under 35 USC 102(b) without specifically rejecting any claims, but requesting additional information. The issue and accompanying information request are responded to herein above under "Requirement for Information under 37 CFR 1.105".

Rejections under 35 U.S.C. §103

The Examiner has rejected claims 1-33 under 35 U.S.C. §103(a) as being unpatentable over the cited references, including Katsikas (US Patent No. 6,868,498) ("Katsikas"), Bandini et al (US Patent No. 7,117,358) ("Bandini"), Sutton, Jr. et al (US Patent No. 7,222,157) ("Sutton"), McCormick et al (US Patent No. 6,421,709) ("McCormick"), Aronson et al (US Patent No. 6,654,787) ("Aronson"), and Loughmiller et al. (US Publication No. 2005/0076084) ("Loughmiller"). Applicants traverse the Examiner's rejections. None the less, claims 1-33 have been canceled and new claims 34-66 are presented to further recite the features of the invention. Accordingly, the rejections are moot.

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Applicants further submit that the new claims distinguish over the cited art at least as pointed out herein below.

Independent claim 34 and its dependent claims

In particular, independent claim 34 calls for:

"A dynamic email spam analysis and management system comprising: a database including a plurality of spam rules, each of the plurality of spam rules having attributes including a score; a spam analyzer operable to process a log file received from a message switch and operable to update the attributes of at least one of the plurality of spam rules; the updating based on information derived from the log file; and a select rules file including one or more select rules of the plurality of spam rules, each of the one or more select rules being included in the select rules file based on its attributes, the select rules file being transmitted to the message switch." (underlining added for emphasis)

Applicants submit that the invention as claimed in claim 34 is neither taught, described, nor suggested in Katsikas and Bandini, even in view of Sutton, McCormick, Aronson, and/or Loughmiller ("Cited Art").

In particular, the claimed, "...spam analyzer operable to process a log file received from a message switch and operable to update the attributes of at least one of the plurality of spam rules, the updating based on information derived from the log file; and a select rules file including one or more select rules of the plurality of spam rules,

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each of the one or more select rules being included in the select rules file based on its attributes, the select rules file being transmitted to the message switch." is not believed to be taught in the Cited Art when considered individually or combined.

Accordingly, the Applicants submit that claim 34 is not unpatentable over the Cited Art. As such, Applicants respectfully request that the Examiner withdraw the rejection.

Claims 35-44 are dependent on claim 34. As such, claims 35-44 are believed allowable based at least upon claim 34.

Independent claim 45 and its dependent claims

Independent claim 45 calls for:

"A dynamic email spam analysis and management system comprising: a message switch including a spam filter operable to receive an email message; and a select rules file including a plurality of spam rules usable by the spam filter to analyze the email message and to determine if the email message is a spam email message or a non-spam email message wherein the analyzing includes creating an entry for the email message in a log file, the entry including spam information corresponding to the email message, and wherein the message switch periodically communicates the contents of the log file to a central server and periodically receives an updated select rules file from the central server, the updated select rules file differing from the select rules file,

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and the updated select rules file becoming the select rules file once received." (underlining added for emphasis)

Applicants submit that the invention as claimed in claim 45 is neither taught, described, nor suggested in the Cited Art.

In particular, the claimed, "...analyzing includes creating an entry for the email message in a log file, the entry including spam information corresponding to the email message, and wherein the message switch periodically communicates the contents of the log file to a central server and periodically receives an updated select rules file from the central server, the updated select rules file differing from the select rules file, and the updated select rules file becoming the select rules file once received," is not believed to be taught in the Cited Art when considered individually or combined.

Accordingly, the Applicants submit that claim 45 is not unpatentable over the Cited Art. As such, Applicants respectfully request that the Examiner withdraw the rejection.

Claims 46-52 are dependent on claim 45. As such, claims 46-52 are believed allowable based at least upon claim 45.

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Independent claim 53 and its dependent claims

Independent claim 53 calls for:

"A method for dynamically updating spam rules, the method comprising: receiving an email message at a message switch; processing the email message against the spam rules to determine if the email message is a spam email message or a non-spam email message; creating a spam information entry corresponding to the email message in a log file; calculating statistics for the spam rules based on the spam information in the log file; updating a database of the spam rules based on the statistics; selecting a set of select rules from the database of the spam rules to form a select rules set; and replicating the select rules set to the message switch wherein the select rules set, once received by the message switch, becomes the spam rules." (underlining added for emphasis)

Applicants submit that the invention as claimed in claim 53 is neither taught, described, nor suggested in the Cited Art.

In particular, the claimed, "...creating a spam information entry corresponding to the email message in a log file; calculating statistics for the spam rules based on the spam information in the log file; updating a database of the spam rules based on the statistics; selecting a set of select rules from the database of the spam rules to form a select rules set; and replicating the select rules set to the message switch wherein the

select rules set, once received by the message switch, becomes the spam rules.” is not believed to be taught in the Cited Art when considered individually or combined.

Accordingly, the Applicants submit that claim 53 is not unpatentable over the Cited Art. As such, Applicants respectfully request that the Examiner withdraw the rejection.

Claims 54–66 are dependent on claim 45. As such, claims 54–66 are believed allowable based at least upon claim 45.

Support for New Claims

Claims 34–66 have been added to further recite the features of the invention. The following listing of the new claims provides bolded parenthetical references to the original specification pointing out at least one instance of support for the claimed features.

34. A dynamic email spam analysis and management system comprising:
- a database including a plurality of spam rules, each of the plurality of spam rules having attributes including a score; (pg. 6, lines 23–27; pg. 8, line 28–pg. 9, line 3)
 - a spam analyzer operable to process a log file received from a message switch and operable to update the attributes of at least one of the plurality of spam rules, the updating based on information derived from the log file; and (pg. 9, line 21–pg. 10, line 3)

a select rules file including one or more select rules of the plurality of spam rules, each of the one or more select rules being included in the select rules file based on its attributes, the select rules file being transmitted to the message switch. (pg. 11, lines 5-22)

35. The system of claim 34 wherein the spam analyzer processes the log file to determine how many times each of the plurality of spam rules was hit and accordingly updates the attributes corresponding to the each of the plurality of spam rules. (pg. 9, lines 24-25; pg. 10, line 28-pg. 11, line 3)

36. The system of claim 34 wherein the attributes corresponding to each of the plurality of spam rules are updated to indicate how many times each of the plurality of spam rules was false-positive-hit. (pg. 9, lines 24-27; pg. 10, line 28-pg. 11, line 3)

37. The system of claim 34 wherein one or more other select rules of the plurality of spam rules are retired, each of the one or more other select rules being retired based on its attributes. (pg. 11, lines 11-13)

38. The system of claim 37 wherein the one or more other select rules have not been hit within a predetermined amount of time. (pg. 11, lines 11-15)

39. The system of claim 34 wherein the select rules file further includes one or more new rules. (pg. 12, lines 15-17)

40. The system of claim 34 wherein the spam analyzer calculates, based on information derived from the log file, how many times each of the plurality of spam rules was hit. (pg. 9, lines 21–25)

41. The system of claim 34 wherein the attributes of each of the plurality of spam rules are modified to indicate how many times each of the plurality of spam rules was false–positive–hit. (pg. 9, lines 21–27)

42. The system of claim 34 wherein the spam analyzer calculates, based on information derived from the log file, how many hits of each of the plurality of spam rules was determined to be for spam email messages and accordingly modifies the corresponding attributes of the each of the plurality of spam rules. (pg. 9, line 21 –pg. 10, line 2)

43. The system of claim 34 wherein the spam analyzer calculates based on information derived from the log file, how many hits of each of the plurality of spam rules was determined to be for non–spam email messages and accordingly modifies the corresponding attributes of the each of the plurality of spam rules. (pg. 9, line 21 –pg. 10, line 2)

44. The system of claim 34 wherein the score of one of the plurality of spam rules is modified manually. (pg. 12, lines 4–29)

45. A dynamic email spam analysis and management system comprising:
a message switch including a spam filter operable to receive an email message;
and (pg. 6 lines 20–22)

a select rules file including a plurality of spam rules usable by the spam filter to analyze the email message and to determine if the email message is a spam email message or a non-spam email message wherein the analyzing includes creating an entry for the email message in a log file, the entry including spam information corresponding to the email message, and wherein the message switch periodically communicates the contents of the log file to a central server and periodically receives an updated select rules file from the central server, the updated select rules file differing from the select rules file, and the updated select rules file becoming the select rules file once received. (pg. 6, lines 23-27; pg. 9, line 21-pg. 10, line 3; pg. 11, lines 5-22)

46. The system of claim 45 wherein a score is included in the select rules file for each of the plurality of spam rules. (pg. 6, lines 23-27)

47. The system of claim 46 wherein a total spam score of the email message is modified using the score of each of the plurality of spam message for which there is a hit on the email message. (pg. 6, lines 26-29)

48. The system of claim 47 wherein, if the total spam score exceeds a score threshold, the email message is identified as a spam email message. (pg. 6, line 29-pg. 7, line 4)

49. The system of claim 45 wherein each of the plurality of spam rules has attributes including one or more of: a score, date and time the spam rule was last updated, number of hits, number of spam hits, number of non-spam hits, and date and time of last hit. (pg. 7, line 9-pg. 9, line 3)

50. The system of claim 47 wherein, if the total spam score does not exceed a score threshold, the email message is identified as a non-spam email message. (pg. 6, line 29–pg. 7, line 4)
51. The system of claim 50 wherein the email message is transferred to an intended recipient. (pg. 7, lines 4–6)
52. The system of claim 45 wherein each of the plurality of spam rules are constructed using regular expressions. (pg. 7, line 8)
53. A method for dynamically updating spam rules, the method comprising:
receiving an email message at a message switch; (pg. 6, lines 20–23)
processing the email message against the spam rules to determine if the email message is a spam email message or a non-spam email message; (pg. 6, lines 22–26)
creating a spam information entry corresponding to the email message in a log file; (pg. 9, lines 11–15)
calculating statistics for the spam rules based on the spam information in the log file; (pg. 9, lines 17–27)
updating a database of the spam rules based on the statistics ; (pg. 9, line 21–pg. 11, line 3)
selecting a set of select rules from the database of the spam rules to form a select rules set; and (pg. 11, lines 7–19)
replicating the select rules set to the message switch wherein the select rules set, once received by the message switch, becomes the spam rules. (pg. 11, lines 5–7 and 17–19)

54. The method of claim 53 wherein the message switch is one of a plurality of message switches each operating on a server as part of a distributed network. (pg. 5, lines 2-9)
55. The method of claim 53 wherein each of the spam rules each has a score. (pg. 6, lines 23-27)
56. The method of claim 55 wherein the processing includes testing the email message against each of the spam rules for a hit and, if a hit exists for the each of the spam rules, modifying a total spam score of the email message based on the score of the each of the spam rules. (pg. 6, lines 23-29)
57. The method of claim 56 wherein the spam information entry corresponding to the email message in the log file includes an identifier for each of the spam rules for which there was a hit. (pg. 6, line 25; pg. 9, lines 7-15)
58. The method of claim 53 wherein the calculating includes calculating, based on the log file, how many times each of the spam rules was hit. (pg. 9, lines 24-25)
59. The method of claim 53 wherein the calculating includes calculating, based on the log file, how many hits for each of the spam rules were for a spam email message versus a non-spam email message. (pg. 9, line 21-pg. 10, line 2)
60. The method of claim 53 wherein the updating includes updating a quantity of false-positive-hits for one or more of the spam rules. (pg. 9, lines 21-27)

61. The method of claim 53 wherein the selecting includes retiring one or more of the spam rules wherein the retired spam rules are not included in the select rules set. (pg. 11, lines 5-13)
62. The method of claim 55 wherein the updating includes updating the score of one or more of the spam rules based on the statistics. (pg. 10, line 28-pg. 11, line 3)
63. The method of claim 55 wherein the score of each of the spam rules can be modified manually. (pg. 12, lines 10-20)
64. The method of claim 54 wherein the replicating includes replicating the select rules set to each of the plurality of message switches. (pg. 11, lines 5-7)
65. The method of claim 53 further comprising, if the email message is determined to be a non-spam email message, transferring the email message to an intended recipient. (pg. 7, lines 1-6)
66. The method of claim 53 embodied as computer-executable instructions stored on a computer-readable medium. (pg. 4, lines 11-14)

Accordingly, reconsideration and examination of the above-referenced application is requested.

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CONCLUSION

Accordingly, in view of the above amendment and remarks it is submitted that the claims are patentably distinct over the prior art and that all the rejections to the claims have been overcome. Reconsideration and reexamination of the above application is requested. Based on the foregoing, Applicants respectfully request that the pending claims be allowed, and that a timely Notice of Allowance be issued in this case. If the Examiner believes, after this amendment, that the application is not in condition for allowance, the Examiner is requested to call the Applicants' representative at the telephone number listed below.

If this response is not considered timely filed and if a request for an extension of time is otherwise absent, Applicants hereby request any necessary extension of time. If there is a fee occasioned by this response, including an extension fee that is not covered by an enclosed check please charge any deficiency to Deposit Account No. 50-0463.

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December 14, 2007
Date

/Noemi Tovar/
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